

REMARKS

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,946,551 to Dimitrakopoulos et al. ("Dimitrakopoulos") in view of U.S. Patent No. 5,998,804 to Suh et al. ("Suh") and further in view of U.S. Patent No. 6,033,998 to Aronowitz et al. ("Aronowitz"). Additionally, claims 8-22 have been restricted out due to a provisional election made with traverse to prosecute claims 1-7.

Applicants hereby affirm the election with traverse to prosecute claims 1-7 and to withdraw claims 8-22 from consideration. As such, following entry of the present Amendment, claims 1-7 are pending in this Application. In view of the following remarks, Applicants respectfully request reconsideration and withdrawal of all the rejections, and allowance of claims 1-7.

Applicants submit that the rejection of independent claim 1 over Dimitrakopoulos in view of Suh and further in view of Aronowitz cannot be sustained, as the cited references do not teach or suggest all the limitations recited by claim 1. As the Office action admits on page 4, "Dimitrakopoulos et al. does not teach . . . depositing a reactive species on a portion of the organic semiconductor layer and reacting the reactive species with the portion of the organic layer to form a dielectric layer."

The Office action, however, argues that Suh cures that deficiency of Dimitrakopoulos. Applicants respectfully disagree. Suh's insulating layer is simply deposited on the semiconductor by processes such as spin coating and brush coating, purely mechanical processes that do not involve any reaction. *See* column 4, lines 66-67. Thus, in contrast to claim 1, Suh does not disclose the forming of an insulating layer by way of a reaction between a reactive species and a semiconductor layer. Furthermore, insulating layers, such as those listed in Suh, are not generally known in the art as reactive species.

The Office action further argues on page 5 that Aronowitz describes, "[r]eacting the reactive species with the portion of the organic layer to form a dielectric layer . . . as the gate oxide layer (insulating layer) is masked and exposed to oxidation." Applicants first respectfully note that Aronowitz describes *inorganic* semiconductor and dielectric layers, as SiO₂ is well

known in the art as an inorganic material. *See* Aronowitz, column 5, line 59. Accordingly, Aronowitz does not teach an organic semiconductor layer or a reaction with an organic semiconductor layer, as recited by claim 1. Second, the oxidation reaction cited by the Office action takes place in a dielectric or insulating layer, and *not* in a semiconductor layer as recited by claim 1. In Aronowitz, after a nitridization process, a mask 208 is removed leaving exposed a layer consisting of element 204 (an oxide), element 206a (made of pure SiO₂), and element 206b (made of SiO_xN_y). *See* column 6, lines 53-60, and FIG. 2E. As oxides in general, and SiO₂ and SiO_xN_y in particular, are well known in the art as dielectric materials, the exposed layer consisting of elements 204, 206a, and 206b, is a dielectric layer. Thus, the oxidation process that is referred to in the Aronowitz abstract and in column 6, lines 61-62, is a reaction in a dielectric layer, and *not* a reaction in a semiconductor layer, as recited by present claim 1.

Accordingly, Dimitrakopoulos, Suh, and Aronowitz, even if combined, do not teach or suggest steps (b) and (c), i.e., depositing a reactive species on a portion of an organic semiconductor layer and reacting the reactive species with the portion of the organic layer to form a dielectric layer, limitations expressly required by claim 1. Therefore, claim 1 is patentable over these references.

Claims 2-7 depend either directly or indirectly on independent claim 1, and thus include all the limitations of claim 1. Therefore, Applicants respectfully submit that these claims are patentable as well, as least for the reasons discussed above with respect to independent claim 1.

CONCLUSION

In view of the foregoing, Applicants present all pending claims for reconsideration and the withdrawal of all grounds of rejection, and allowance of claims 1-7 in due course. The Examiner is invited to contact Applicants' undersigned representative by telephone at the number

listed below to discuss any outstanding issues.

Respectfully submitted,



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